

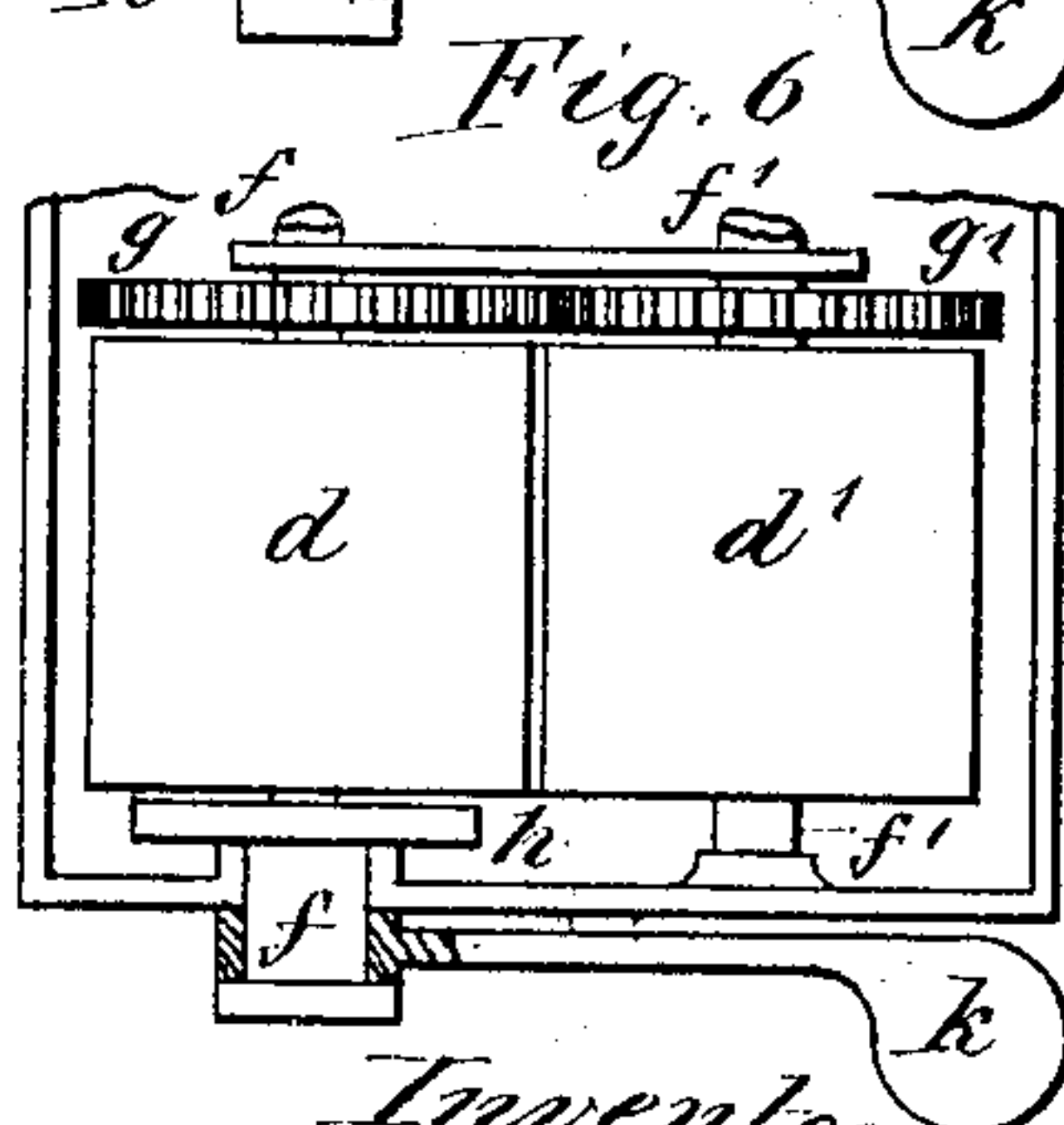
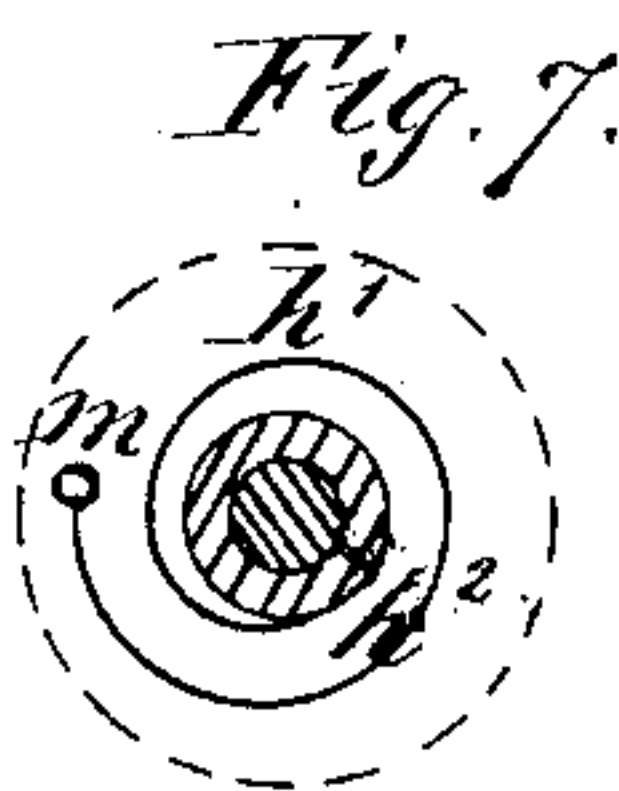
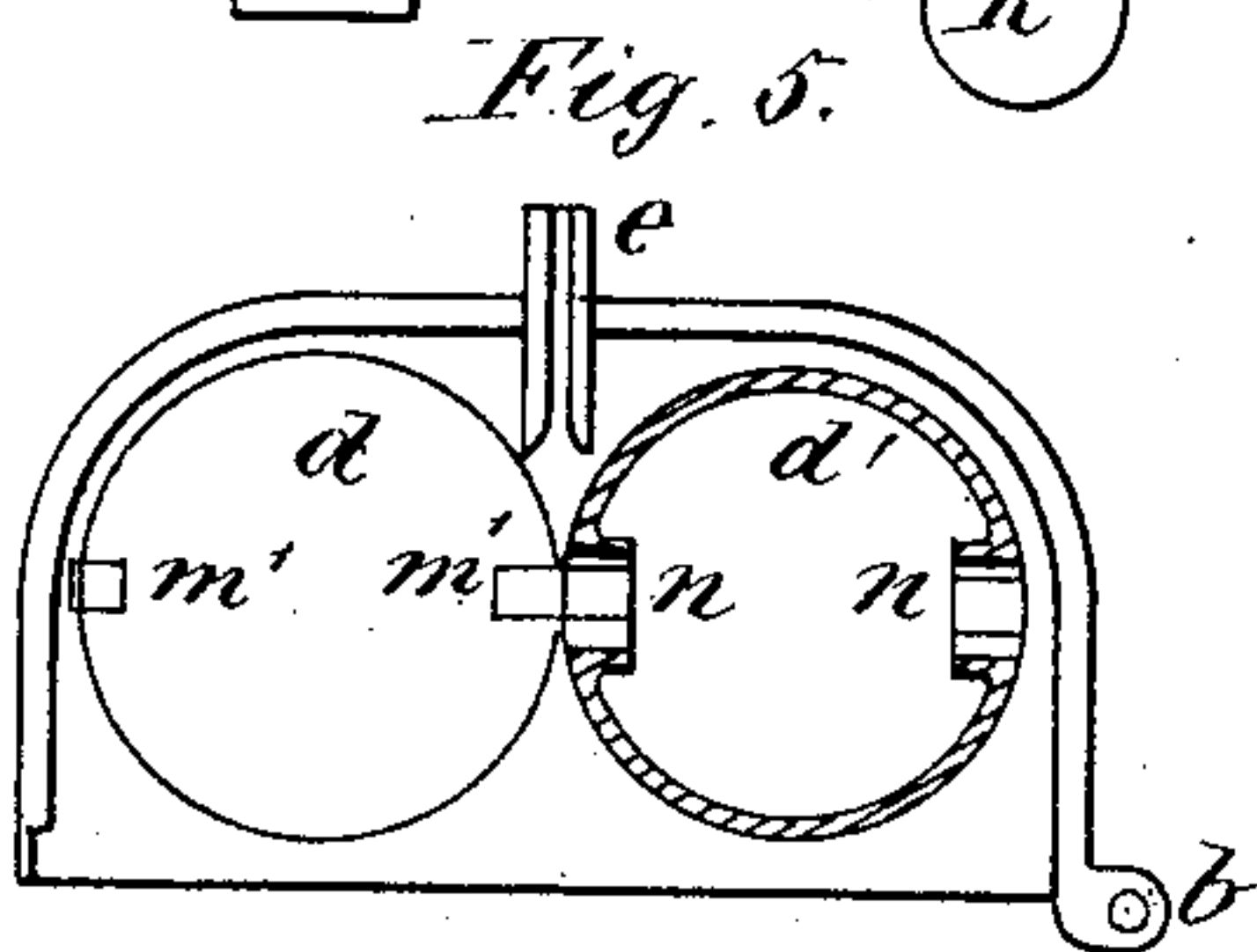
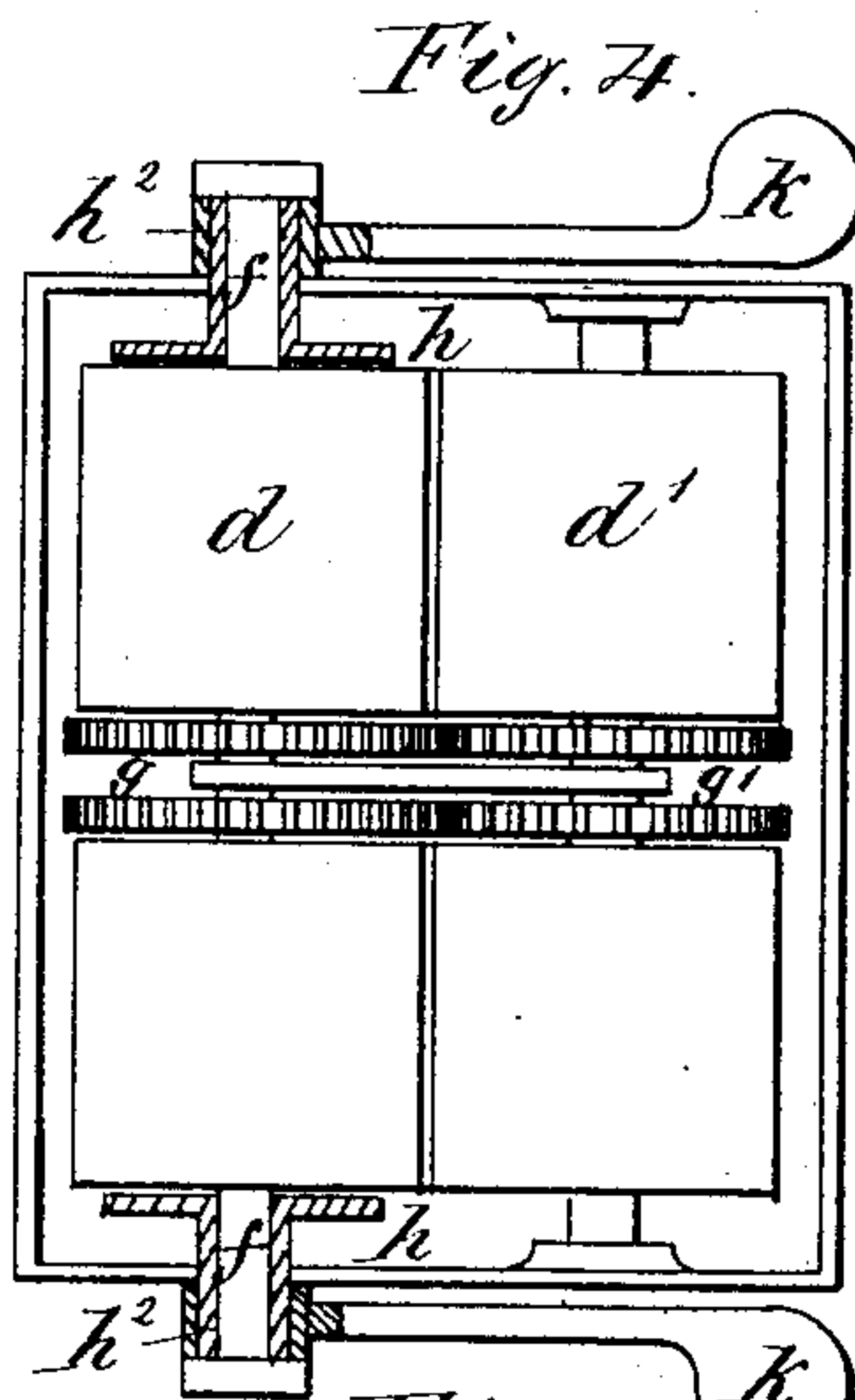
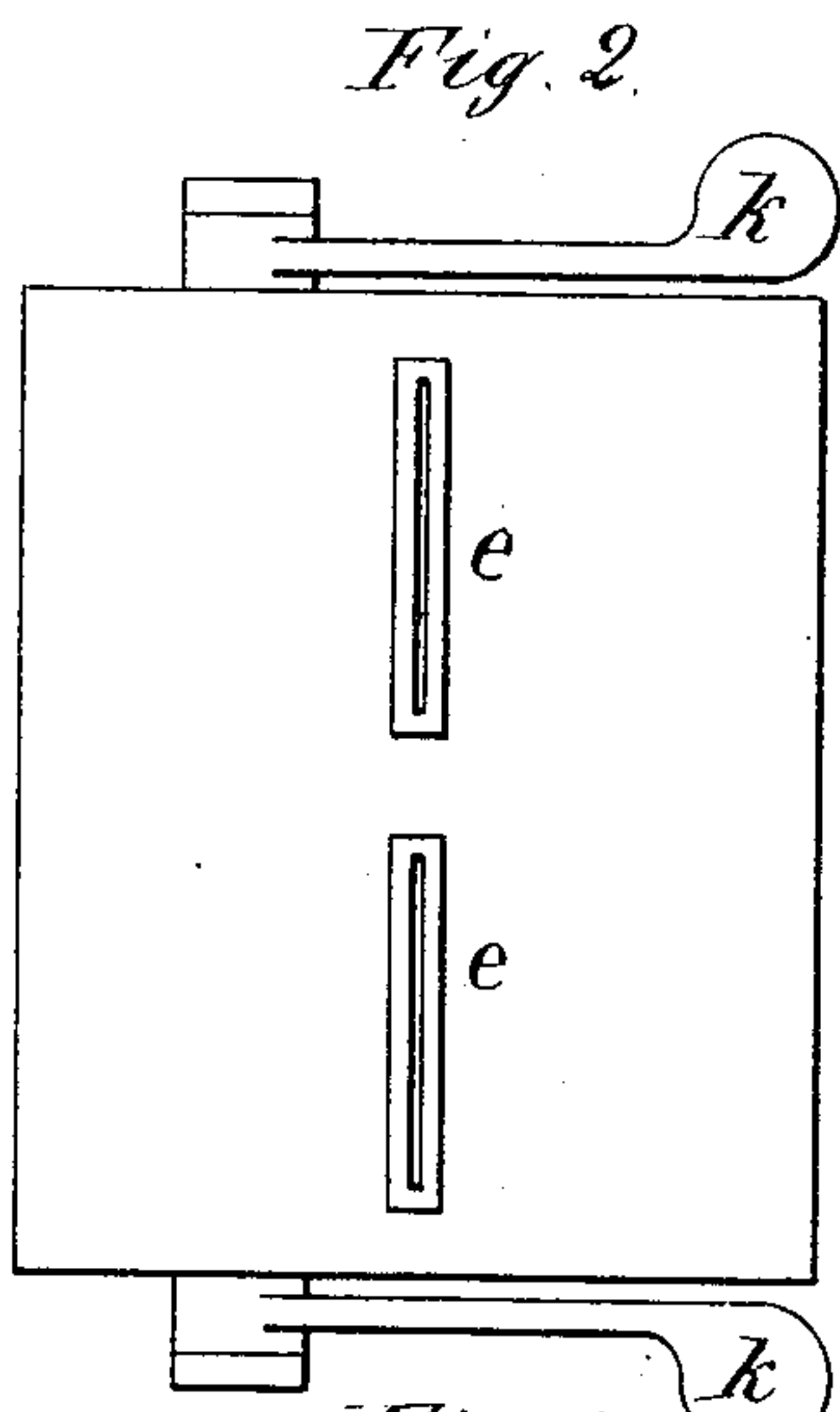
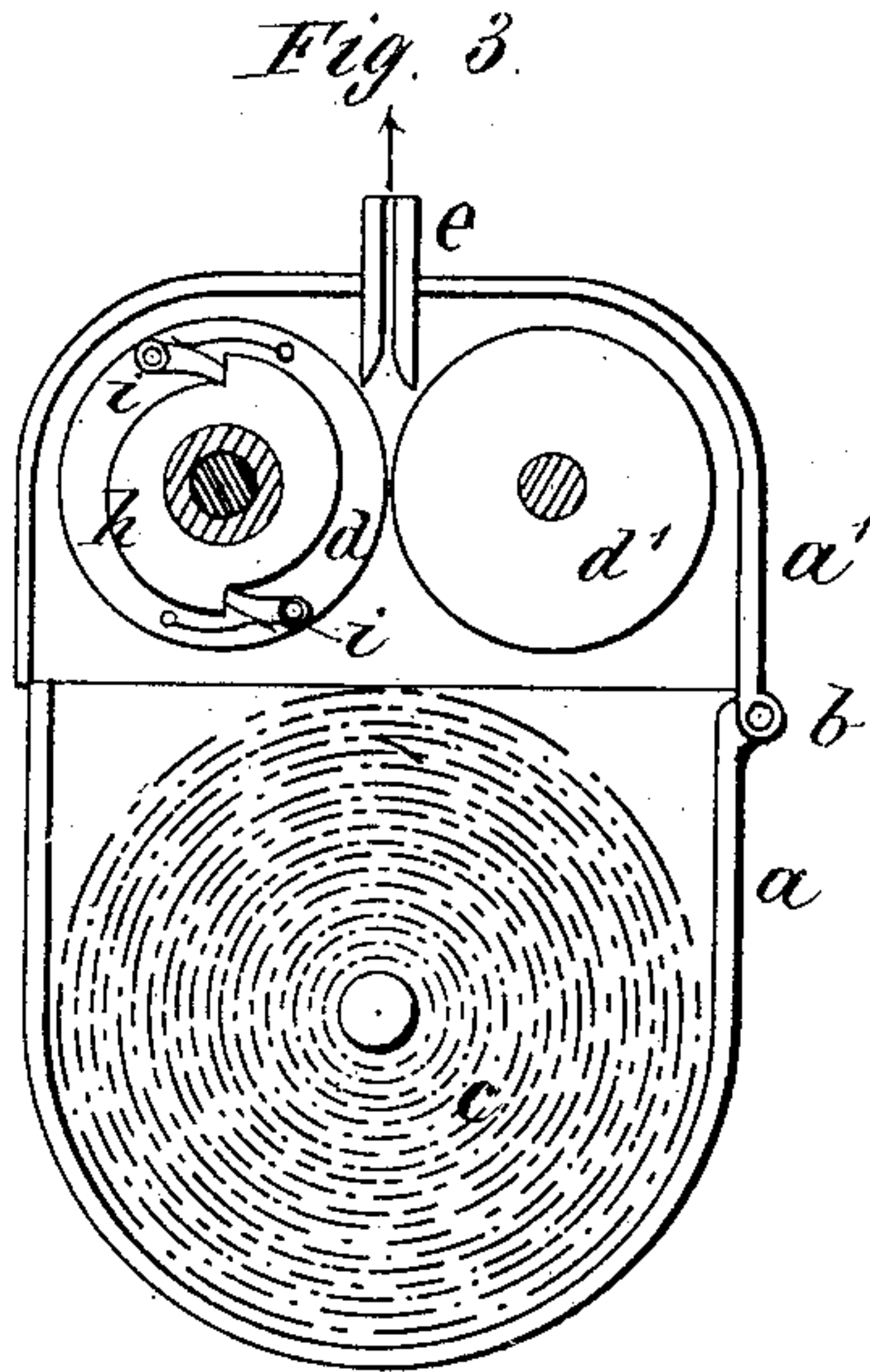
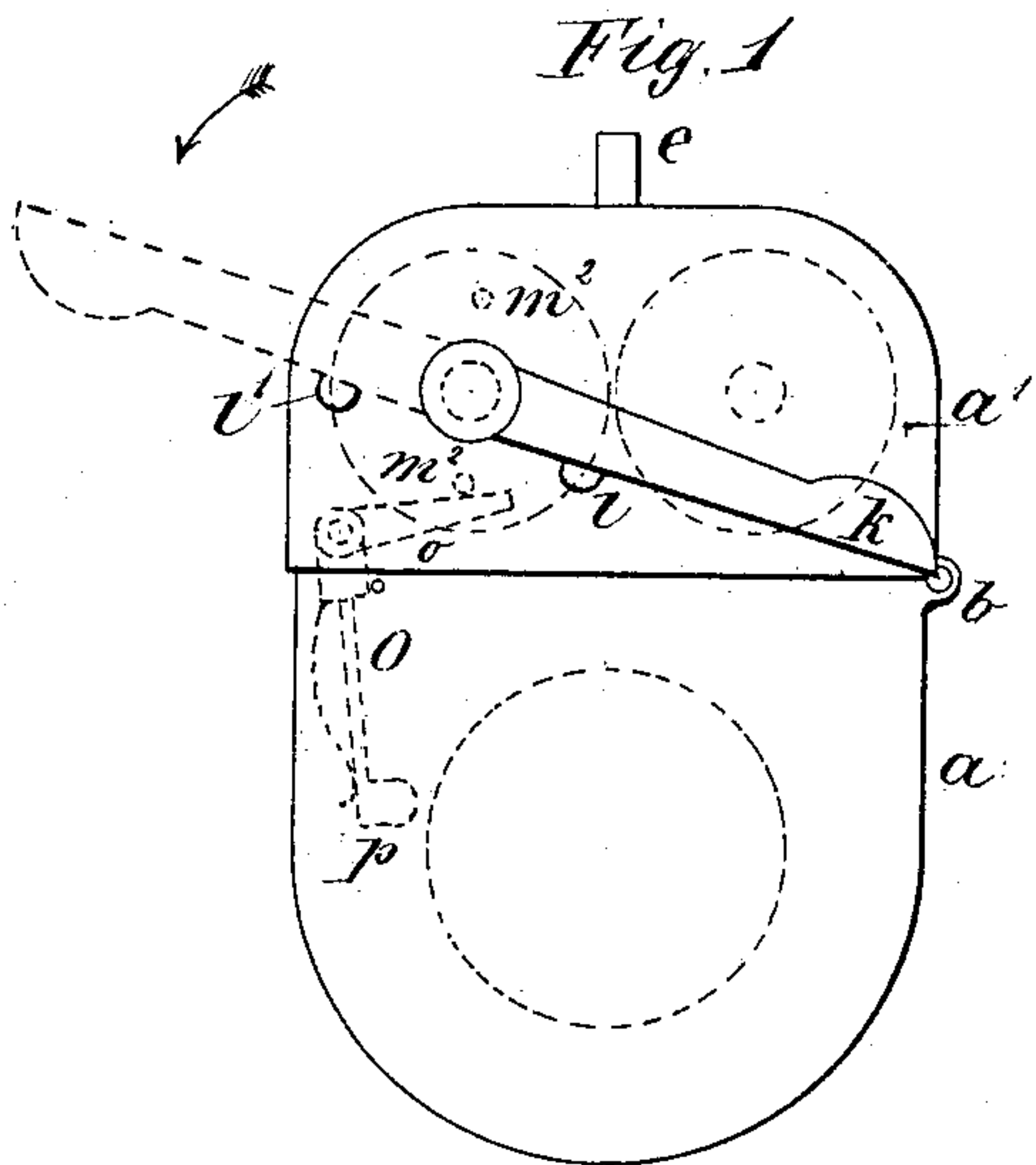
(No Model.)

M. BEBRO.

APPARATUS FOR PUNCHING AND REGISTERING TICKETS.

No. 269,911.

Patented Jan. 2, 1883.



Witnesses
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UNITED STATES PATENT OFFICE.

MARCUS BEBRO, OF CANFIELD HOUSE, PRIORY ROAD, KILBURN, COUNTY OF MIDDLESEX, ENGLAND.

APPARATUS FOR PUNCHING AND REGISTERING TICKETS.

SPECIFICATION forming part of Letters Patent No. 269,911, dated January 2, 1883.

Application filed March 21, 1882. (No model.) Patented in England March 4, 1881, No. 941; in France October 11, 1881, No. 145,267, and in Belgium October 12, 1881, No. 55,954.

To all whom it may concern:

Be it known that I, MARCUS BEBRO, a citizen of Great Britain, residing at Canfield House, Priory Road, Kilburn, in the county of Middlesex, Great Britain, have invented certain new and useful improvements in apparatus for delivering consecutively-numbered tickets to persons riding in public vehicles or entering places of amusement; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The object of this invention is to check the receipt of money from persons traveling in public vehicles or entering places of amusement, by the use of a novel construction of box designed to contain a continuous roll of consecutively-numbered tickets, and apparatus for checking the delivery of the same from the said box; and the invention consists, first, in the combination, in a ticket register or punch, of two delivery-rolls for delivering tickets from a continuous strip of paper, one of said rolls being provided with a punch and the other with a matrix, whereby each ticket as it passes between the rolls is defaced or canceled, the latter roll being hollow and serving as a receptacle for the punched-out disks, as hereinafter more fully described; second, in certain details of construction and arrangement of mechanism, all as fully described hereinafter, and pointed out in the claims.

In carrying out my invention I construct a box, the capacity of which is made sufficiently large to hold one or more rolls of consecutively-numbered tickets, according to the purpose for which the box is intended to be used—that is to say, if the box is intended for checking the receipt of money for one class or rate of fare or entrance fee, only a single compartment containing the roll of tickets and the apparatus for delivering the same in the manner as hereinafter described, will be required. If two or more rolls of tickets are to be paid out, representing different rates of fare or entrance fees,

then the box is divided into compartments agreeing with the various fares or fees to be checked by the delivery of tickets from the said box. Each compartment from which tickets are delivered is provided with separate and distinct operating mechanism.

The description of tickets which I prefer to use, and for which the improved box forming the subject of this invention is designated, are similar to those printed, numbered, and perforated by mechanism described in the Letters Patent of the United States granted to me under date of October 18, 1881, No. 248,275. As each roll of tickets contained in the box is delivered therefrom by independent but similar mechanism, it will be sufficient to describe the mechanism employed for delivering tickets from a continuous single roll. Any one compartment of the box containing a continuous roll of consecutively-numbered tickets is provided with two rollers, which are by preference serrated upon their peripheries. One of these rollers is the driver, and the circumference of each of the rollers is equal to the length of two tickets that form part of a number of such composing a length or ribbon of paper forming the roll of tickets. The second roller is loosely mounted on fixed bearings and so arranged that it bears upon the serrated surface of the driving-roller. The rollers are geared together and are driven intermittently through the medium of a lever-handle and ratchet on the axis of one roller acting against a pawl secured to the said roller, so that when the handle is moved a half a turn in one direction the rollers are similarly moved to deliver a length of paper from the box, representing one ticket. During the time the lever-handle is returning to its normal position the rollers are at rest. It will thus be seen that when one end of the length of paper composing the roll of tickets contained in the box is placed between the two rollers and the lever-handle is moved in the manner described, each half-turn will deliver a length of paper from the box through a suitable orifice representing one ticket, which is then torn off at the perforations. The lever-handle is returned to its normal position without actuating the rollers, and

the latter are again ready to deliver another ticket. As each ticket passes between the rollers it is defaced or punched by the rollers, and at the same time a stud on one of the rollers actuates a hammer, and a bell is caused to ring to indicate that a ticket has been delivered, as hereinafter more fully described.

In order that the invention may be better understood, I will describe the same in detail, reference being had to the accompanying sheet of drawings, made about full size, similar letters of reference being marked on corresponding parts on all the figures alike, and in which—

Figure 1 represents in elevation, and Fig. 2 in plan, my improved ticket-register. Fig. 3 represents a section of the box with one side removed, showing the position of the roll of tickets and the direction the paper travels in passing from the box. This view also shows the ratchet and pawl actuating the rollers. Fig. 4 represents a top section of the box, showing as an example two compartments for containing and delivering therefrom two distinct classes of tickets. Fig. 5 represents a vertical section. Fig. 6 is a plan section of the upper portion or lid of the box, showing the position of the punches employed for defacing the tickets; and Fig. 7 represents the coiled spring employed for forcing the handle back to its normal position, during which time the delivering-rollers are stationary.

In these figures a is the lower case of the box containing the roll of tickets c , and a' is the lid or cover of the box containing the apparatus employed for delivering the length of paper from the roll c intermittently from the box through the guide-orifice e . The lid a' is hinged to the lower portion of the box at b , thus offering, when the box is open and the lid thrown back, the greatest facility for placing the rolls of continuous consecutively-numbered tickets in the lower receptacle and passing one end of each roll between the rollers preparatory to being delivered, after which the box may be closed and locked by an authorized official.

The rollers d and d' , between and by which the tickets are passed out from the box through the orifice e , are equal in circumference to the length of two tickets, but are so actuated that they move in half-turns intermittently in the manner following: The rollers d and d' are loosely mounted upon their axes f and f' , respectively, and are geared together by the toothed wheels g g' . Upon the face or end of roller d , which is the driver, the pawls i i are fixed which actuate the ratchet-disk h . The boss of this ratchet runs loose on the axis f , and the portion of this boss outside the box-lid a' is squared or otherwise prepared for the reception of the handle k , which forms a fixture with such ratchet and box. Stops l l' on the lid a' , Fig. 1, are provided as a means for limiting the movement of the handle k in either direction.

The coiled spring h' , (shown in Fig. 7,) has one of its ends secured to the ratchet-boss h^2 , and the other is fixed to the case at m , so that when the handle k is turned a half-turn in the direction of the arrow, Fig. 1, and brought against the stop l' , as shown in dotted lines, the said spring will be wound up. When the lever is released the spring will automatically return to its normal position against the stop l , as shown in full lines in said Fig. 1. The first half-turn of the lever gives (through the medium of the pawls i , ratchet h , and wheels g g'), a like half-turn to the rollers d d' , during which a length or strip from the roll c equal to one ticket is passed between and by them from the box and out of the guide-orifice e . During the time the lever-handle is being returned to its normal position the rollers d and d' remain motionless. The protruding length or strip representing one ticket is then torn off at the perforations, and the apparatus is again ready to deliver another ticket. During the passage of the ticket between the rollers, and with every half-turn of the same, the punches m' m' in the driving-roller d , Figs. 5 and 6, come opposite to and enter the matrices n in the roller d' . By these means a disk is punched out of each ticket as it passes out of the box, and the ticket is thereby canceled. The disks as punched out pass through the matrix into the hollow part of the roller d' , from whence they are cleared as required.

In this manner I am enabled to dispense with the usual complicated counting mechanism employed in the class of apparatus known as "ticket-punches," and one of the rolls is made to serve as a receptacle for the punched-out disks.

When the construction of the register and the relative arrangement of rolls is considered, it will be readily seen that when the case is once locked there is no possible way by which the contents of the roll can be tampered with.

The toothed wheel g is provided with two pins, m^2 m^2 , that at each half-turn of said wheel come in contact with and actuate a bell-crank lever, o , and striker p , Fig. 1, which, with every half-turn of the rollers delivering a complete ticket, strikes a bell, and so gives an alarm every time a ticket is passing from the box.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a ticket-register, the combination of two delivery-rolls for delivering tickets from a continuous strip, one of said rolls carrying a punch and the other being provided with a matrix, whereby each ticket as it passes between the rolls is defaced or canceled by having a disk punched out of it, substantially as and for the purpose specified.

2. In a ticket-register, the combination of two delivery-rolls for delivering tickets from a continuous strip, one of said rolls carrying a punch and the other being hollow and provided with matrices communicating with the

interior of the roll, whereby each ticket as it passes between said rolls is canceled by having a disk punched out of it, and whereby said punched-out disks are forced into one of the rolls, substantially as and for the purpose specified.

3. The combination of the roll *d*, provided with the punches *m'* and carrying pawls *i*, the ratchet *h*, the hollow roll *d'*, provided with matrices *n*, the lever *k*, spring *h'*, and the lid *a'*, provided with stops *l l'*, all arranged and operating substantially as and for the purpose specified.

4. The combination, with the rolls *c d d'* and the gear-wheels *g'* and *g*, the latter having pins or studs *m² m²*, of the bell-crank lever *o*, striker *p*, and a bell, all constructed and arranged for operation substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

MARCUS BEBRO.

Witnesses:

THOMAS WRIGLEY,
J. W. P. JAURALDE.